

**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) are set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims \* and ADD new claims \* in accordance with the following:

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**1. (currently amended)** An optical switch, comprising:

a mirror, an inclination angle of which varies depending on an application voltage;  
a driver device applying the application voltage to the mirror;  
an oscillation device generating an additional signal of a prescribed frequency;  
a superimposition device superimposing the additional signal on the application voltage;  
a detection device detecting a signal component of the prescribed frequency ~~from~~  
which appears in light reflected on the mirror when the application voltage is applied to the mirror; and  
a control device controlling the application voltage based on the detected signal component.

**2. (original)** The optical switch according to claim 1, further comprising:

a storage device storing at least one of information about the application voltage and information about optical-coupling efficiency of the optical switch; and  
a notification device notifying a prescribed notification addressee of the information stored in the storage device.

**3. (original)** The optical switch according to claim 1, wherein

said oscillation device generates an additional signal of a frequency higher than a mechanical resonance frequency of said mirror.

4. **(currently amended)** An optical switch, comprising:

a mirror, an inclination angle in a first direction of which varies depending on a first application voltage and an inclination angle in a second direction of which varies depending on a second application voltage;

a first driver device applying the first application voltage to the mirror;

a second driver device applying the second application voltage to the mirror;

a first oscillation device generating a first additional signal of a first frequency;

a second oscillation device generating a second additional signal of a second frequency;

a first superimposition device superimposing the first additional signal on the first application voltage;

a second superimposition device superimposing the second additional signal on the second application voltage;

a detection device detecting respective signal components of the first and second frequencies from which appear in light reflected on the mirror when the first and second application voltages are respectively applied to the mirror;

a first control device controlling the first application voltage based on the detected signal component of the first frequency; and

a second control device controlling the second application voltage based on the detected signal component of the second frequency.

5. **(currently amended)** An optical switch, comprising:

a former-stage mirror, an inclination angle in a first direction of which varies depending on a first application voltage and an inclination angle in a second direction of which varies depending on a second application voltage;

a latter-stage mirror, an inclination angle in a third direction of which varies depending on a third application voltage and an inclination angle in a fourth direction of which varies depending on a fourth application voltage;

a first driver device applying the first application voltage to the former-stage mirror;

a second driver device applying the second application voltage to the former-stage mirror;

a first oscillation device generating a first additional signal of a first frequency;

a second oscillation device generating a second additional signal of a second frequency;

a first superimposition device superimposing the first additional signal on the first application voltage;

a second superimposition device superimposing the second additional signal on the second application voltage;

a third driver device applying the third application voltage to the ~~latter~~ latter-stage mirror;

a fourth driver device applying the fourth application voltage to the ~~latter~~ latter-stage mirror;

a third superimposition device superimposing the third additional signal on the third application voltage;

a fourth superimposition device superimposing the fourth additional signal on the fourth application voltage;

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(m)  
a detection device detecting respective signal components of the first, second, third and fourth frequencies ~~from which appear in light reflected on the latter-stage mirror~~ when the first and second application voltages are respectively applied to the former-stage mirror and the third and fourth application voltages are respectively applied to the latter-stage mirror; and

a first control device controlling the first application voltage based on the detected signal component of the first frequency;

a second control device controlling the second application voltage based on the detected signal component of the second frequency;

a third control device controlling the third application voltage based on the detected signal component of the third frequency; and

a fourth control device controlling the fourth application voltage based on the detected signal component of the fourth frequency.

6. **(currently amended)** A control device for an optical switch with a mirror, an inclination angle of which varies depending on an application voltage, comprising:

a driver device applying the application voltage to the mirror;

an oscillation device generating an additional signal of a prescribed frequency;

a superimposition device superimposing the additional signal on the application voltage;

a detection device detecting a signal component of the prescribed frequency ~~from~~  
which appears in light reflected on the mirror when the application voltage is applied to the  
mirror; and

a control device controlling the application voltage based on the detected signal  
component.

7. **(currently amended)** A control device for an optical switch with a mirror, an  
inclination angle in a first direction of which varies depending on a first application voltage and  
an inclination angle in a second direction of which varies depending on a second application  
voltage, comprising:

a first driver device applying the first application voltage to the mirror;

a second driver device applying the second application voltage to the mirror;

a first oscillation device generating a first additional signal of a first frequency;

a second oscillation device generating a second additional signal of a second  
frequency;

a first superimposition device superimposing the first additional signal on the first  
application voltage;

a second superimposition device superimposing the second additional signal on  
the second application voltage;

a detection device detecting respective signal components of the first and second  
frequencies ~~from~~ which appear in light reflected on the mirror when the first and second  
application voltages are respectively applied to the mirror;

a first control device controlling the first application voltage based on the detected  
signal component of the first frequency; and

a second control device controlling the second application voltage based on the  
detected signal component of the second frequency.

8. **(currently amended)** A control device for an optical switch with both a former-stage  
mirror, an inclination angle in a first direction of which varies depending on a first application  
voltage and an inclination angle in a second direction of which varies depending on a second  
application voltage, and a latter-stage mirror, an inclination angle in a third direction of which  
varies depending on a third application voltage and an inclination angle in a fourth direction of  
which varies depending on a fourth application voltage, comprising:

a first driver device applying the first application voltage to the former-stage mirror;

a second driver device applying the second application voltage to the former-stage mirror;

a first oscillation device generating a first additional signal of a first frequency;  
a second oscillation device generating a second additional signal of a second frequency;

a first superimposition device superimposing the first additional signal on the first application voltage;

a second superimposition device superimposing the second additional signal on the second application voltage;

a third driver device applying the third application voltage to the latter-stage mirror;

a fourth driver device applying the fourth application voltage to the latter-stage mirror;

a third oscillation device generating a third additional signal of a third frequency;  
a fourth oscillation device generating a fourth additional signal of a fourth frequency;

a third superimposition device superimposing the third additional signal on the third application voltage;

a fourth superimposition device superimposing the fourth additional signal on the fourth application voltage;

a detection device detecting respective signal components of the first, second, third and fourth frequencies from which appear in light reflected on the latter-stage mirror when the first and second application voltages are respectively applied to the former-stage mirror and the third and fourth application voltages are respectively applied to the latter-stage mirror;

a first control device controlling the first application voltage based on the detected signal component of the first frequency;

a second control device controlling the second application voltage based on the detected signal component of the second frequency;

a third control device controlling the third application voltage based on the detected signal component of the third frequency; and

a fourth control device controlling the fourth application voltage based on the detected signal component of the fourth frequency.

9. **(currently amended)** An optical switch, comprising:

a mirror, an inclination angle of which varies depending on an application voltage;

driver means for applying the application voltage to the mirror;

oscillation means for generating an additional signal of a prescribed frequency;

superimposition means for superimposing the additional signal on the application

voltage;

detection means for detecting a signal component of the prescribed frequency

from which appears in light reflected on the mirror when the application voltage is applied to the mirror; and

control means for controlling the application voltage based on the detected signal

component.